**Commonwealth of Kentucky**
**Division for Air Quality**

# *PERMIT STATEMENT OF BASIS*

Conditional Major permit No. F-05-026
FIRESTONE BUILDING PRODUCTS COMPANY
INDEPENDENCE, KY.
July 11, 2005
SUKHENDU K MAJUMDAR, REVIEWER
Plant I.D. # 21-117-00177
SIC/Source: 3086
AI # 71732

## STATEMENT OF BASIS:

## SOURCE DESCRIPTION:

Firestone Building Product Company submitted an application for construction/operating permit that was received by the Division on May 17, 2005 Firestone Building Products has asked that a federally enforceable permit be written that requires particulate matter less than 10 microns (PM10) and Volatile Organic Compounds (VOC) control. This keeps their potential to emit $PM_{10}$ and VOCs under the major source threshold. Firestone Building Products Company will manufacture foam insulation board for building industries. The company has prepared the application for the relocation of the Covington, KY facility to Independence, Kentucky.

The Firestone Building Products site is located at 8710 Holton Drive, in Kenton county, Independence, Kentucky. The processes to be performed at the Independence facility will include the following:

1. Unloading of raw materials into receiving tanks.
2. Mixing of 'B-Side' materials (Polyol and additives)
3. Delivery of 'B-Side' mixture (polyol and additives) and pentane from the B-side, which are combined with A-side (MDI) at the laydown nozzle. The combination begins the reaction to create the foam, which cures between paper backing.
4. 'Setting' of foam while on the conveyor to the saw cut area.
5. Cutting of continuously fed sheet of foam panel product into various panel lengths and trimmed on sides
6. Stacking, wrapping, and storing of panels in the production/warehouse building until shipping.

## COMMENTS:

Type of control and efficiency

Particulate Control
Firestone Building Products has asked that a federally enforceable construction/operating permit be

written that requires particulate and VOC control. This keeps their potential to emit $PM_{10}$ and VOC under the major source threshold.

| Emission Point | Type of Control | Control Efficiency |
|---|---|---|
| 01 Trim/Sawing Foam board Equipment | Two dust collectors (Micro fiber over synthetic media bag house) | 0.997 |
| 02 Pentane, Polyol and MDI lay down process | NG fired Regenerative Thermal Oxidizer (RTO) | 0.95 |

Emission factors and their source

| Emission Point | Emission Factor | Source |
|---|---|---|
| 01 Trim/Saw Foam board Equipment | 27.7 lb PM $PM_{10}$/ Ton raw material | Similar Plant dust collector data. |
| 02 Pentane, Polyol, MDI lay down process | 0.02 HAPs/ Ton raw material and 33.8 VOC/ton of raw material | Plant test from similar facility. |
| 04,05 Two (2) Natural Gas Fired Warehouse Heaters<br>03 Small Boiler | See AP-42: 1.4 | AP-42: 1.4 |

## EMISSION AND OPERATING CAPS DESCRIPTION:

Particulate Control
Firestone Building Products has asked that a federally enforceable construction/operating permit be written that requires particulate control. This keeps their potential to emit $PM_{10}$ under the major source threshold.

VOC and HAPS

Firestone Building Products has also requested federally enforceable limits to keep their potential to emit VOCs below major source levels. HAPs emissions are below major source thresholds.

**Emission Limitations:**

All saw cut emissions as particulate shall be collected and routed to the two dust collectors. The process line shall not operate if the dust collectors are not operational to avoid exceeding 90 tons/year particulate emission and to avoid major source thresholds.

Exhaust gases from the enclosed lay down and hot laminator containing pentane, polyol and MDI shall be going to regenerative thermal oxidizer (RTO) all the time and capture and destruction efficiency of the regenerative thermal oxidizer to be 92% and 95% respectively to avoid requirement of a Title V permit.

PM and $PM_{10}$

**Specific Monitoring Requirements:**

The permittee shall visually check for emissions from each baghouse and/or filter discharge stack on a daily basis and record whether or not there are visible emissions in an operating log.

The permittee shall inspect the condition of the bags in each baghouse and/or filters in each filter unit at least once every six months.

The permittee shall calibrate, maintain, and operate according to manufacturer's specifications a monitoring device for the continual measurement of the combustion chamber temperature of the oxidizer.

**Specific Recordkeeping Requirements:**

The permittee shall maintain a written log of the daily pressure drop for each baghouse and/or filter and make sure log available for inspection by Division personnel upon request. The log shall indicate the name or initials of the person performing the pressure drop monitoring.

Visual checks, inspection results, bag and/or filter replacement, and operator training shall be recorded in an operating log which shall be kept current at all times.

The permittee shall maintain records of the following:

a. Each incident when VOC emissions were not properly controlled by the oxidizer. This record shall include the date, time, duration, cause, and any corrective action taken.
b. Continuous records of the combustion chamber temperature of the oxidizer.
c. All maintenance activities performed at the oxidizer, including preventive maintenance and routine inspections.

## CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.